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the adult characteristics of the original genus are reduced to a larval condition, but the original genus still continues to "accelerate" its own development, though more slowly, and finally reduces its original characteristics also to a larval condition, and acquires in the adult state different characteristics from the first series.

This, with other confirmatory evidence, renders it probable that generic changes may simultaneously take place in a number of species without the loss of their specific characteristics, and in the same way genera may be simultaneously transferred from one suborder to another without the loss of their generic characteristics. The development of generic characteristics thus appears to be governed by a law which is not dependent upon physical surroundings. Species on the other hand, though they "exhibit a proportion of characters which are the successive stages of that one which progresses farthest," yet "the majority of specific characters are of divergent origin,—are "morphic as distinguished from developmental.* Thus specific characteristics are essentially adaptive, and therefore due mainly to natural selection. The author's conclusions are given in six propositions, from which we quote the two given below:

I. Species have developed from preëxistent species by an inherent tendency to variation, and have been preserved in given directions and repressed in others, by the operation of the law of Natural Selection.

II. Genera have been produced by a system of retardation or acceleration in the development of individuals; the former on preëstablished, the latter on preconceived lines of direction. Or in other words, while nature's series have been projected in accordance with the law of acceleration and retardation, they have been limited, modified and terminated by the law of natural selection, which may itself have operated in part by the same law.

AN ILLUSTRATED WORK ON THE BUTTERFLIES OF NEW ENGLAND.— Mr. Samuel H. Scudder will publish during the coming winter, a large and expensively illustrated work upon New England Butterflies. He will give, as far as possible, a complete history and description of each species during every stage of its existence; tables and descriptions of genera will be introduced, together with a preliminary chapter upon the general structure of butterflies, which will serve as a guide to their careful study; their geographical distribution, both in and out of New England, will be largely discussed, and the book virtually form a manual for all the Northern United States; it will be generously illustrated by colored plates of every species, done in the highest style of the art.

To make the work as complete as possible, the author invites the assistance of entomologists in obtaining living or fresh specimens of eggs, larvæ and pupæ, for illustration and study. Without such assistance it would be impossible, in a single summer, to obtain all the requisite material. Full credit will be given in the book for every item of assistance rendered.

The success with which Mr. Saunders, of Canada, has reared butterflies in their earlier stages, ought to encourage our friends to similar efforts. Mr. Saunders' method is to confine each female butterfly in a small, dark box,—a pill box for example,—in which she is obliged to deposit her eggs; he endeavors, before the eggs are hatched, to notice what plant the butterfly seems to affect; the young larvæ are fed upon it, and, in many instances, successfully reared.

As careful descriptions of these larvæ and pupæ cannot be prepared without many specimens, and as we have so little accurate knowledge of the earlier stages of our native butterflies, our friends need not fear to send Mr. Scudder all the specimens they can find. If possible, they should be sent alive, so as to secure good colored drawings of each species; the larvæ should be accompanied by fresh, moistened leaves of their food plant for nourishment on the journey, and forwarded by mail in small, light, but strong boxes (tin is preferable), to S. H. Scudder, Boston Society of Natural History, Berkeley street, Boston, Mass., marked in addition, *Insects*. This latter precaution is necessary, because, in case of a temporary absence from the city, Mr. Scudder will leave directions to have boxes thus marked, sent at once to his artist. The specimens should be accompanied by the name and address of the sender, and, when known, the name of the insect and of the plant on which it feeds. When it does not seem practicable to forward them alive, they may be sent in small bottles of glycerine, or in a mixture of one part pure carbolic acid (Squibb's preparation), and twenty-four parts water. In this case also they should be sent at once and by mail, that the colors may be seen before they fade. When neither of these methods is possible, spirits may be used, but the colors will soon be lost. If any one obtains a number of eggs and is able to raise them, it would be best to forward, from time to time, two or three specimens both of the eggs and chrysalids, and the same number of *each moult* of the larva; the butterfly which has laid the eggs should always be preserved, and forwarded with the larvæ, etc., for satisfactory identification. If any one is in doubt about the food plant of some insect which he has found, it would be best to write a letter of enquiry to Mr. Scudder, who will be glad to answer any questions.

Those willing to assist in this work should commence at once to trace the history of the Theclæ and Lycænæ, of which almost nothing is known. The former feed upon various trees and shrubs, such as the oak, thorn, willow, pine and cedar, and also on the hop-vine; the latter upon different kinds of herbs, as Lespedeza, etc.

The author trusts that those who live outside of New England, will remember that he must depend absolutely upon them for information concerning the earlier stages of those insects which are very rare in New England, but common with them. Any assistance that they can render him will be most gratefully received.

THE KINGFISHERS.—A monograph of this beautiful family of Birds is now being published by Mr. R. B. Sharpe, of the Zoölogical Society of London. It will be issued in twelve to fourteen parts, imperial 8vo, each part to contain eight beautifully colored lithographic plates. All the species